NRC FORM 618 U.S. NUCLEAR REGULATORY COMMISSION (8-2000) 10 CFR 71 CERTIFICATE OF COMPLIANCE FOR RADIOACTIVE MATERIAL PACKAGES a. CERTIFICATE NUMBER b. REVISION NUMBER c. DOCKET NUMBER d. PACKAGE IDENTIFICATION NUMBER PAGE PAGES 9034 13 71-9034 USA/9034/AF OF

2. PREAMBLE

- a. This certificate is issued to certify that the package (packaging and contents) described in Item 5 below meets the applicable safety standards set forth in Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
- b. This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.
- 3. THIS CERTIFICATE IS ISSUED ON THE BASIS OF A SAFETY ANALYSIS REPORT OF THE PACKAGE DESIGN OR APPLICATION
 - a. ISSUED TO (Name and Address)General AtomicsP.O. Box 85608San Diego, CA 92186-9784

b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION
General Atomics application dated October 4, 1995, as supplemented.

4. CONDITIONS

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below.

5. (a) Packaging

(1) Model No.: TRIGA-I

(2) Description

TRIGA fuel element shipping container. The outer packaging is a steel drum, approximately 22.5 inches in diameter by 39-1/4 inches high. The inner vessel is a 5-inch Schedule 40 carbon steel pipe. Dimensions of the inner vessel are approximately 31 inches in height with a 1/4-inch thick wall and a 5-inch inside diameter. The top of the inner vessel is a threaded pipe cap and the bottom is a welded 1/4-inch thick flat disc. The inner vessel is centered and supported within the outer packaging by eight, 3/8-inch diameter braced, support spacer rods. The void between the inner vessel and the outer packaging is filled with vermiculite tamped to a minimum density of 4.5 lbs/ft³. Maximum gross weight including contents is approximately 235 pounds.

(3) Drawing

The packaging is constructed in accordance with General Atomic Company Drawing No. TOS396C160, Rev. G.

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5. (b) Contents

(1) Type and form of material

TRIGA fuel elements containing uranium-zirconium-hydride or erbium-uranium-zirconium-hydride with nominal fuel composition (excluding erbium content) as described in Table A.1-1 of the October 4, 1995 application, and clad with stainless steel, aluminum or incoloy. Uranium enriched to a maximum 93.5 w/o in the U-235 isotope. The H to Zr atomic ratio within the fuel meat must not exceed 1.65.

(2) Maximum quantity of material per package

U-235 content not to exceed 1.39 kg, contained in a maximum of 7 1.5-inch diameter fuel elements, or a maximum of 25 0.5-inch diameter fuel elements, with nominal fuel composition (excluding erbium content) as described in Table A.1-2 (Rev. 1) of the October 4, 1995, application. For enrichments greater than 5 weight percent U-235, uranium content not to exceed an A_2 quantity.

(c) Criticality Safety Index

0.4

- 6. In addition to the requirements of Subpart G of 10 CFR Part 71:
 - (a) The package shall be prepared for shipment and operated in accordance with the Operating Procedures of Chapter 8 of the application.
 - (b) The packaging must meet the Acceptance Tests and Maintenance Program of Chapter 9 of the application.
- 7. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
- 8. Expiration date: December 31, 2010.

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REFERENCES

General Atomic Company application dated October 4, 1995.

Supplements dated: December 5, 1995, October 16, 2000, and November 16, 2005.

FOR THE U.S, NUCLEAR REGULATORY COMMISSION

Robert A. Nelson, Chief Licensing Section Spent Fuel Project Office

Office of Nuclear Material Safety

and Safeguards

Date: December 8, 2005



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION REPORT
Docket No. 71-9034
Model No. TRIGA-I
Certificate of Compliance No. 9034
Revision No. 13

SUMMARY

By application dated November 16, 2005, General Atomics (GA) requested renewal of Certificate of Compliance No. 9034, for the Model No. TRIGA-I package. GA did not request any changes to the package design or authorized contents. The certificate has been renewed for a five year term.

EVALUATION

General Atomics requested renewal of Certificate of Compliance No. 9034 on November 16, 2005. GA did not request any changes to the package design or authorized contents.

Condition No. 5(c) of the certificate was revised to delete the wording "Transport Index for Criticality Control" and "Minimum transport index to be shown on label for nuclear criticality control." The deleted wording was replaced with "Criticality Safety Index" as defined in 10 CFR 71.4.

Condition No. 7 of the certificate was revised to clarify that the package is approved for use under the general license provisions of 10 CFR 71.17. This change is due to a revision in the numbering of the section in 10 CFR Part 71, that became effective on October 1, 2004 (69 FR 3698).

The staff reviewed the documents referenced in the certificate and determined that the documentation was available and complete.

CONCLUSION

The certificate has been renewed for a five year term that expires on December 31, 2010. This change does not affect the ability of the package to meet the requirements of 10 CFR Part 71.

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REGISTERED USERS FOR 9034

General Atomics Company Attn: Mr. Keith E. Asmussen 3550 General Atomics Court San Diego, CA 92121-1122

Quality Energy Services and Tests Corp. Attn: Mr. J. C. Wilson P.O. Box 9501 4141 S. Galveston Street Tulsa, OK 74157

U.S. Department of Energy Attn: Mr. James M. Shuler EM-24/CLV-1081 1000 Independence Ave., S.W. Washington, DC 20585-2040